

AMENDMENTS TO THE CLAIMS:

This listing of claims replaces all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A modem comprising:

a base unit for transmitting a data signal, the base unit being in communication with a telephone line and receiving an original signal from the telephone line, the base unit comprising an automatic gain control circuit which drives ~~an FM~~ a frequency modulation (FM) modulator, the automatic gain control circuit receiving a composite signal that is based on the original signal and an echo signal, the automatic gain control circuit and generating ~~a~~ the data signal from the composite signal by maintaining a level of the composite signal within a predetermined linear amplification region of a transmission channel used to transmit the data signal, the base unit ~~generating~~ transmitting the data signal at radio frequency (RF) via analog ~~frequency~~ FM modulation without performing analog-to-digital conversion on the original signal; and

a communication card which receives the data signal from the base unit over a wireless medium, and which performs echo canceling on the data signal.

2. (Cancelled)

3. (Currently Amended) The modem of claim 1, wherein the base unit comprises:

the FM modulator for transmitting the data signal, the FM modulator being part of the transmission channel; and

the predetermined linear amplification region ~~comprises~~ takes into account a linear amplification region of the FM modulator transmitter.

4 to 8. (Cancelled)

9. (Currently Amended) The modem of claim 1, wherein the communication card includes a switch for selecting a type of medium over which to transmit and receive data signals, the switch being triggered automatically in response to presence or absence of a wired connection.

10. (Currently Amended) A modem comprising:  
a base unit in communication with a telephone line for receiving an original signal from the telephone line, the base unit comprising an automatic gain control circuit which drives ~~an FM~~ a frequency modulation (FM) modulator, the automatic gain control circuit receiving a composite signal that is based on the original signal and an echo signal, the automatic gain control circuit ~~and~~ generating a data signal from the composite signal by maintaining a level of the composite signal within a predetermined linear amplification region of a transmission channel that can be used to transmit the data signal, the base unit ~~generating~~ transmitting the data signal at radio frequency (RF) via analog ~~frequency~~ FM modulation without performing analog-to-digital conversion on the original signal; and

a communication card for transmitting data signals to, and receiving the data signal from, the base unit, the communication card including a switch for selecting a type of medium over which to transmit and receive data signals, the switch being triggered automatically in response to presence or absence of a wired connection.

11. (Original) The modem of claim 10, wherein the type of medium comprises a wired medium.

12. (Original) The modem of claim 10, wherein the type of medium comprises wireless medium.

13. (Cancelled)

14. (Currently Amended) The modem of claim 13, wherein the circuitry comprises a line presence indicator; and

wherein the switch is triggered to operate the modem in wired mode when the line presence indicator detects ~~the~~ a wired medium and the switch is triggered to operate the modem in wireless mode when the line presence indicator does not detect the wired medium.

15 to 18. (Cancelled)

19. (Currently Amended) A modem comprising:

a base unit which interfaces to a telephone line, the base unit including a hook switch circuit that seizes the telephone line by drawing direct current from a central office battery, the base unit comprising an automatic gain control circuit which drives ~~an FM~~ a frequency modulation (FM) modulator, the automatic gain control circuit receiving a composite signal that is based on an original signal from the telephone line and an echo signal, the automatic gain control circuit ~~and~~ generating a data signal from the composite signal by maintaining a level of the composite signal within a predetermined linear amplification region of a transmission channel that can be used to transmit the data signal, the base unit ~~generating~~ transmitting the data signal at radio frequency (RF) via analog ~~frequency FM~~ modulation without performing analog-to-digital conversion on the original signal; and

a communication card for transmitting data signals to, and receiving data signals from, the telephone line via the base unit.

20. (Currently Amended) The modem of claim 19, wherein the communication card comprises a switch for selecting a type of medium over which to exchange the data signals with the base unit, the switch being triggered automatically in response to presence or absence of a wired connection.

21. (Original) The modem of claim 20, wherein the type of medium comprises a wired medium.

22. (Original) The modem of claim 20, wherein the type of medium comprises a wireless medium.

23. (Currently Amended) The modem of claim 10, wherein the base unit further comprises the FM modulator for transmitting the data signal to the communication card, the FM modulator being part of the transmission channel, and the predetermined linear amplification region ~~comprises~~ takes into account a linear amplification region of the FM modulator transmitter.

24. (Currently Amended) The modem of claim 19, wherein the base unit further comprises the FM modulator for transmitting the data signal to the communication card, the FM modulator being part of the transmission channel, and the predetermined linear amplification region ~~comprises~~ takes into account a linear amplification region of the FM modulator transmitter.

25. (Previously Presented) The modem of claim 1, wherein the data signal has substantially no nonlinear distortion.

26. (Previously Presented) The modem of claim 1, wherein the communication card comprises a switch for selecting a medium over which to transmit and/or receive data signals, the type of medium comprising a wired medium or a wireless medium.

27. (Currently Amended) The modem of claim 26, wherein the communication card further comprises circuitry which triggers the switch automatically in response to presence or absence of a wired connection ~~based on whether a wired medium is interfaced to the modem.~~

28. (Currently Amended) The modem of claim 27, wherein the circuitry comprises a line presence indicator; and  
wherein the switch is triggered to operate the modem in wired mode when the line presence indicator detects ~~the~~ a wired medium and the switch is triggered to operate the modem in wireless mode when the line presence indicator does not detect the wired medium:

29. (Previously Presented) The modem of claim 1, wherein the base unit further comprises a hybrid circuit which separates signals flowing between the base unit and the telephone line, the hybrid circuit introducing the echo signal.

30. (Previously Presented) The modem of claim 10, wherein the base unit further comprises a hybrid circuit which separates signals flowing between the base unit and the telephone line, the hybrid circuit introducing the echo signal.

31. (Previously Presented) The modem of claim 19, wherein the base unit further comprises a hybrid circuit which separates signals flowing between the base unit and the telephone line, the hybrid circuit introducing the echo signal.

32. (Currently Amended) A modem comprising:

a base unit comprising:

an automatic gain control circuit which receives a composite signal that is obtained from an original signal from a telephone line and an echo signal, and which generates a data signal from the composite signal; and

a transmitter for use in outputting the data signal from the base unit, the transmitter being part of a radio frequency (RF) transmission channel, the automatic gain control circuit generating the data signal from the composite signal by maintaining a level of the composite signal within a linear amplification region of the RF transmission channel ~~transmitter~~; and

a communication card which receives the data signal from the base unit over a wireless medium, and which performs echo canceling on the data signal.

33. (Previously Presented) The modem of claim 33, wherein the base unit further comprises a hybrid circuit which separates signals flowing between the base unit and the telephone line, the hybrid circuit introducing the echo signal.